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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,893	09/28/2001	Claus Erdmann Furst	45900-00064	1329

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EXAMINER

MICHALSKI, JUSTIN I

ART UNIT PAPER NUMBER

2644

DATE MAILED: 08/26/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/964,893

Applicant(s)

FURST ET AL.

Examiner

Justin Michalski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,5,7,8,17,18,35,36 and 38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,7,17,18 and 36 is/are rejected.
- 7) ☒ Claim(s) 5,35, and 38 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of Group I, species A with traverse in the reply filed on 4 June 2004 is acknowledged. The traversal is on the ground(s) that claim 1 is generic to all the claims of Group I. This is not found persuasive because Group I contains the patentably distinct species A, C, D, E, and F. However, the applicant's argument that claim 1 (Species B) is generic to claim 36 is found persuasive. Therefore, Claim 36 will be treated as in elected Group I, Species A.

The requirement is still deemed proper and is therefore made FINAL.

2. This application contains claims 6, 8-14, 26-34, and 37 are drawn to an invention nonelected with traverse in Paper No. 12. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

### ***Claim Objections***

3. The claims are objected to because of the following informalities: Each claim must be the object of a sentence starting with "I (or we) claim," "The invention claimed is" (or the equivalent). See MPEP 608.01(m). Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 1, 7, 17, 18, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin (US Patent 5,796,848) in view of Krokstad et al. (Hereinafter "Krokstad") (US Patent 5,276,739).

Regarding Claim 1 Martin discloses a microphone assembly of a hearing aid comprising a microphone assembly casing (6) having a sound inlet port (15), a transducer for receiving acoustic waves through the sound inlet port (1), and for converting received acoustic waves to analog signals (18), said transducer being positioned within the microphone assembly casing, an electronic circuit positioned within the microphone assembly casing, said electronic circuit comprising a signal path defined by a cascade of a pre amplifier (8) for amplifying analog audio signal from the transducer, and a sigma-delta modulator for providing digital signals (7). Martin does not disclose the microphone assembly further comprises filter means in the signal path between the pre-amplifier and the sigma-delta modulator. Krokstad also discloses a microphone assembly for a hearing aid (Figure 5a) including a preamplifier (11a and b) and an analog to digital converter such as a sigma delta modulator (ADC). Krokstad discloses a filter means 13 between the pre-amplifier and analog to digital converter in order to deconvolve an input signal for a given frequency range. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a filter between the pre-amplifier and the sigma-delta modulator

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in order to deconvolve a specific frequency range of audio signal to be processed by the analog to digital converter as disclosed by Krokstad (Col 7, lines 49-52).

Regarding Claim 7, it is well known in the art that circuits can be formed on integrated circuits to create a smaller circuit.

Regarding Claim 17, Martin further discloses the microphone assembly 6 is connected to a signal processor, which inherently teaches as a digital signal processor as the signal was converted to a digital signal prior in the A/D converter 7.

Regarding Claim 18, Martin further discloses the unit as a digital hearing aid (abstract).

Regarding Claim 36, Martin further discloses filter 13 had an upper critical frequency of 8 kHz (Col. 7, lines 47-52) which inherently is a filter for passing a frequency band.

### ***Allowable Subject Matter***

6. Claims 5, 35, and 38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.**

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See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Michalski whose telephone number is (703)305-5598. The examiner can normally be reached on 8 Hours, 5 day/week.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Isen can be reached on (703)305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JIM



XU MEI  
PRIMARY EXAMINER